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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BUTLER, DENNIS

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 04/29/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,026

Applicant(s)

ELLIS ET AL.

Examiner

Dennis M. Butler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-15 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. This action is in response to the application filed on April 5, 2001. Claims 1-15 are pending.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4, 8 and 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Williams, U. S. Patent 6,714,021.

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Per claims 1 and 11-12:

A) Williams teaches the following claimed items:

1. a first timer performing coarse timing measurement of an electronic circuit with Coarse Timebase 1226 of figures 15 and 18 and at column 8, lines 12-29;
2. a second timer performing fine timing measurement of the electronic circuit with Fine Timebase 1227 of figures 15 and 18 and at column 8, lines 39-54;
3. storage means for storing timing measurements of the first and second timers with the timing analyzer software, with the (Cn,Fn) timebase values of figure 19, at column 11, lines 5-18 and at column 11, line 53 – column 12, line 18.

Per claim 2:

Williams describes the timing analyzer as a component of a BIST system on an IC at column 8, lines 55-61 and at column 12, line 62 – column 13, line 21.

Per claim 3:

Williams describes separately controlled delay elements with delay elements 1201 through 1215 and 1231 through 1294 of figure 15 and at column 8, lines 12-29 and 39-54.

Per claims 4 and 13:

Williams describes delay elements controlled by individual control words with the Coarse and Fine Timebase Select words 1219 and 1298 of figure 15 and at column 8, lines 16-23 and 40-41.

Per claim 8:

A) Williams teaches the following claimed items:

1. a first timer performing coarse timing measurement of an electronic circuit with Coarse Timebase 1226 of figures 15 and 18 and at column 8, lines 12-29;
 2. a second timer performing fine timing measurement of the electronic circuit with Fine Timebase 1227 of figures 15 and 18 and at column 8, lines 39-54;
 3. storage means for storing timing measurements of the first and second timers with the timing analyzer software, with the (Cn,Fn) timebase values of figure 19, at column 11, lines 5-18 and at column 11, line 53 – column 12, line 18;
 4. a BIST system on an IC at column 8, lines 55-61 and at column 12, line 62 – column 13, line 21.
6. Claims 5-7 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, U. S. Patent 6,714,021.

Per claims 5-7 and 14-15:

Williams fails to explicitly teach using binary counters to generate the individual control words as claimed. However, Williams describes generating individual control words (Coarse and Fine Timebase Select words 1219 and 1298 of figure 15) and describes incrementing the individual control words to increment the amount of delay with elements 1409 and 1414 of figure 18. Therefore, Williams

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discloses the claimed invention except for explicitly reciting using binary counters to generate/increment the control words. However, binary counters are well known and it would have been obvious to one having ordinary skill in the art at the time the invention was made to use incrementing binary counters in order to increment the binary values of the control words of the coarse and fine timers in order to increment the amount of delay and increment the number of delay elements that actively delay the signal output from the fine or the coarse delay timers.

7. Claims 1 and 11-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Dilger et al., U. S. Patent 6,161,420.

Per claims 1 and 11-12:

A) Dilger et al teach the following claimed items :

1. a first timer performing coarse timing measurement of an electronic circuit with Counter 104 and Subtract Circuit 116 of figure 2, at column 5, lines 19-21 and 45-54 and at column 8, lines 33-55;
2. a second timer performing fine timing measurement of the electronic circuit with Timer 134 of figure 2, at column 6, lines 32-57 and at column 10, lines 23-36;
3. storage means for storing timing measurements of the first and second timers with the storage means in embedded controller 202 that store coarse measurement 118 and fine measurement 136, at column 7, lines 31-46 and at column 10, lines 37-42.

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8. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis M. Butler whose telephone number is 703-305-9663. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Dennis M. Butler
Dennis M. Butler
Primary Examiner
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